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Evaluation of various leakage current paths with different switching conditions (Conference Paper)

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Abstract

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The Photovoltaic (PV) panel is the arrangement of solar cells that becoming famous in the world for commercial electric power market via transformer-less topology. However, non-existing galvanic isolation is the biggest problem occurred in the whole system and is known as leakage issue. In this paper, different paths of leakage current were analyzed with various wave shapes and ranges. Furthermore, it was also verified using DC decoupling and AC decoupling with full bridge rectifier. Moreover, the EMC filter and high range load were used to evaluate the performance. Moreover, here also shown the transfer function of EMC filter with its simulated figure. © 2014 IEEE.

Author keywords

AC decoupling DC coupling EMC filter Leakage current (LC) Pulse Width Modulation (PWM)

Indexed keywords

Engineering controlled terms: Bridge circuits Counting circuits Electromagnetic compatibility Leakage currents Modulation Power markets Solar cells Solar power generation Voltage control

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